

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit: 3661
Examiner: T. TO

Applicant : Thomas LENZ, et al.
Serial No. : 09/618,853
Filed : July 18, 2000
For : PROCESS FOR AUTOMATIC
DRIVE SLOP CONTROL (ASR)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I hereby certify that this paper is being deposited this date with the U.S. Postal Service as first class mail addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.	
<i>Diane Kess</i> Signature	<i>Sept-22, 03</i> Date

#15 Reply Brief
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REPLY BRIEF

Sir:

Appellants submit this Reply Brief in response to the Examiner's Answer dated July 29, 2003. For the reasons contained herein and in the Brief on Appeal, it is requested that the Final Office Action dated February 25, 2003, be reversed.

1. U.S. '719 Does Not Disclose Adjusting the Desired Slip Value
of the Rear Wheels Based on the Speed of the Non-Driven Wheels

In the Examiner's Answer, on page 3, the Examiner states that "the main object of U.S. '719 is to determine the desired slip as a function of the driver's command." The Examiner further states that "the important point that either the invention or the patent focus on is to provide the system and method that determines the desired slip in order to provide great traction

when the vehicle is traveling on a mountain road or is traveling on a surface with low coefficient.”

Appellants do not dispute that the object of both U.S. ‘719 and the claimed invention is to adjust the desired slip value of the rear driven wheels in order to take into account driving conditions. Appellants do dispute that U.S. ‘719 discloses the same method for accomplishing this object as is claimed in the present application.

According to the Examiner, U.S. ‘719 discloses, at col. 3, lines 28-36, that “the desired slip value of the rear wheels is adjusted based on the speed of the non-driven wheels.” This statement is factually incorrect. The passage cited by the Examiner does not state this at all. To the contrary, at col. 3, lines 41-44, U.S. ‘719 states:

“According to the invention, this desired slip is adjusted in accordance with the position of the gas pedal, the engine rpm’s, or the driver’s command derived from the position of the gas pedal and the engine’s rpm’s.”

There is no mention in this passage of adjusting the desired slip value based the speed of non-driven wheels, as asserted by the Examiner. Indeed, the passage does not state that the slip value of the rear wheels is adjusted based on any “dynamic values” associated with the front wheels as required in the claimed invention. While the Examiner might have argued that a person skilled in the art would realize that “the dynamic values” are dependent on the position of the gas pedal, he has not done this. He has based the rejection on 35 U.S.C. 102(a) and factually incorrect statements of what is disclosed in U.S. ‘719.

II. The Examiner Misunderstands the Disclosure of U.S. ‘719

The passage in U.S. ‘719 which begins at col. 3, line 28, describes a process for adjusting the desired slip value of the rear wheels. Beginning in the last paragraph of page 4 of the Examiner’s Answer, the Examiner quotes U.S. ‘719 as stating that: “the speeds of the non-

driven wheels are sent to reference value former 28, which calculates a reference velocity V_{FZG} for the drive slip control by averaging the two wheel speed signal values. In comparators 32-36, the speeds of the drive wheels are compared with the reference velocity which has been found to determine the actual drive slip at the drive wheels of the vehicle.” Based on this quotation, the Examiner states that a person of ordinary skill in the art would understand that U.S. ‘719 discloses a system and method comprising the step of “if the dynamic values associated with the front wheels exceed a threshold value, increasing the normal drive slip value of the rear wheels.”

This statement demonstrates a lack of understanding by the Examiner of this passage in U.S. ‘719. The speeds of the non-driven wheels are commonly used by the industry to determine a vehicle reference speed. The subscript “FZG” stands for the German word “Fahrzeug,” which means “vehicle.” In every anti-slip system, a vehicle speed has to be determined as a reference speed in order to make it possible to recognize the deviation or slip of each wheel from this reference speed. It is common in this field to use the speeds of the non-driven front wheels to determine the vehicle’s reference speed because these have the least slip, and therefore best accord with the real vehicle speed. In order to determine the drive slip of the drive wheels, the velocity of the drive wheels (the rear wheels) has to be compared with the vehicle reference speed. This is well known in the field and is all that is taught by the passage quoted by the Examiner. The passage does not teach that “if the dynamic values associated with the front wheels exceed a threshold value, increasing the normal drive slip value of the rear wheels,” as stated by the Examiner. There is no connection between the sentences quoted by the Examiner and what he asserts they teach.

III. Velocity is Not the Same as Acceleration

On page 5 of the Examiner's Answer, the Examiner takes Appellants to task for arguing that claims 2 is not disclosed by U.S. '719 because speed, acceleration, and velocity are well known and each "quantity" is totally related or can be computed from the others. Since acceleration is a rate of change of velocity with respect to time, "the acceleration of the wheels inherently existed" in U.S. '719.¹

Of course, Appellants do not dispute that acceleration is the rate of change of velocity with respect to time and can be computed from the velocity. This relationship is the definition of acceleration and has been known since at least the time of Galileo. What Appellants do dispute, however, is the Examiner's holding that a claim which refers to the acceleration of the front wheels is fully anticipated by a prior art reference which refers to the speed of the front wheels. Acceleration is not the same as speed or velocity. If it were, then Newton's second law of motion, $F = ma$, could be equivalently written as $F = mv$. No person of ordinary skill in the art would make such a statement.

Accordingly, the Examiner has played fast and loose with claim 2 changing its language from acceleration to speed in order to reject this claim under 35 U.S.C. 102(a) as being fully anticipated by U.S. '719. It is submitted that this amounts to a hindsight reconstruction of the claimed invention and should not be permitted.

IV. The Examiner Misunderstands the Term Dynamic Values

At the bottom of page 3 of the Examiner's Answer, the Examiner states that the "dynamic values could be the vehicle speed, velocity, or acceleration." This is too superficial a

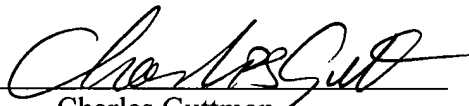
¹ Although this paragraph in the Examiner's Answer refers to both claims 2 and 5, the argument presented by the Examiner is only relevant to claim 2. The Examiner does not address the argument presented at the bottom of page 5 of the Appeal Brief relative to claim 5.

view of the meaning of the term “dynamic values.” Persons skilled in the art of antiskid controls use the term “dynamic values” to refer to frequently changing values of wheel acceleration/deceleration or wheel velocities. For example, U.S. Pat. No. 3,866,982, a copy of which is enclosed, claim 1 is directed to a vehicle antiskid control system of the type having wheel monitoring means for producing output signals “according to the dynamic behavior of the wheel.” See also col. 3, lines 29-61, of that patent.² Thus, the dynamic values of the wheels have nothing to do with the vehicle speed as supposed by the Examiner.

For these reasons, and the reasons given in the Brief on Appeal, the statement appearing near the bottom of page 5 of the Examiner’s Answer, that U.S. ‘719 “teaches every aspect of the claimed invention explicitly[!]” must be rejected. Therefore, Appellant’s respectfully request reversal of the Final Office Action dated February 25, 2003.

Respectfully submitted,

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Date: Sept. 22, 2003

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Attachment: Copy of U.S. Pat. No. 3,866,982

² Appellants request that the Board take judicial notice of this patent.